

**KENYA HIGH SCHOOL MOCK 2020
BIOLOGY PAPER 1**

231/1
BIOLOGY
PAPER 1 (Theory)
TIME: 2 HOURS

KENYA HIGH SCHOOL JULY 2019

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FOR EXAMINER'S USE ONLY:

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1-31	80	

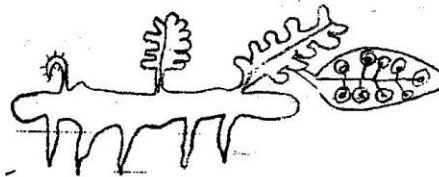
1. Name the branch of biology that involves the study of:-

(a) Organisms for the sake of classifying them

(2 marks)

(b) Microscopic organisms

2. The diagram below represents a plant.



(a) Name the division to which the plant belongs

(1 mark)

(b) Give three reasons for your answer in (a) above

(3 marks)

3. State three parameters that can be used to estimate growth in seedlings

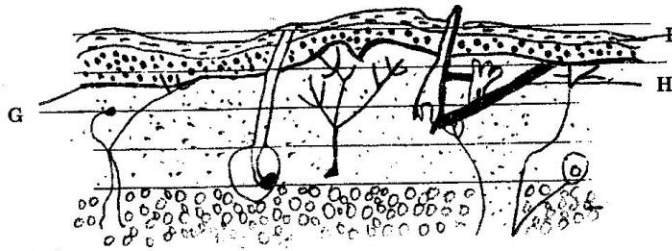
(3 marks)

4. Equal amounts of crushed Irish potato was placed in equal volumes of hydrogen peroxide solution at indicated PH. The volume of the gas produced was measured and recorded as shown in the table below

PH	4.0	7.0	9.0
Volume of gas(cm ³)	2.7	5.7	7.7

- (a) Name the gas that was produced (1 mark)
- (b) Account for the difference in the volume of the gas produced in PH 4.0 and PH 9.0 (2 marks)

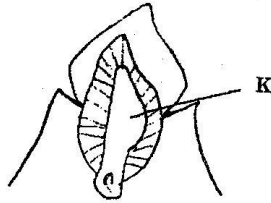
5. The diagram below shows a longitudinal section of mammalian skin.



- (a) Name the parts labeled F and G (2 marks)
- (b) State one function of each of the parts labeled H and J (2 marks)
6. What are the names of modified leaves enclosing bougainvillea flowers whose function is to attract insect pollinations? (1 mark)
- 7(a) A dog weighing 15.2 kg requires 266KJ while a mouse weighing 50g requires 2736KJ per day Explain:- (2 marks)
- (b) Under what condition is lactic acid formed in human muscles? (1 mark)

8. The diagram below represents a section through a human tooth
 (a) Name the type of tooth shown

(1 mark)



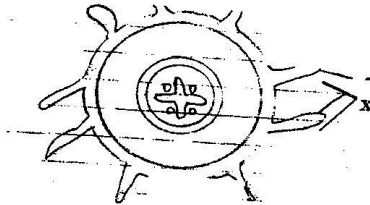
(b) Give a reason for your answer in (a) above

(1 mark)

(c) State the functions of the structures found in the part labeled K

(2 marks)

9. The diagram below represents transverse section of a plant part. Study it and answer the questions that follows.



(a) Name the class in which the plant belongs

(1 mark)

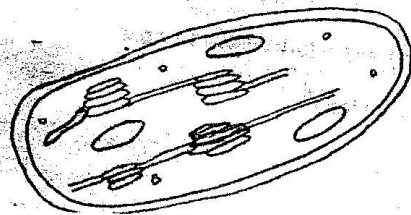
(b) Give a reason for answer (a) above

State one adaptation for the structure labeled X to their functions

(1 mark)

10. Below is a diagram of an organelle

(2 marks)



(a) State the function of the organelle drawn above

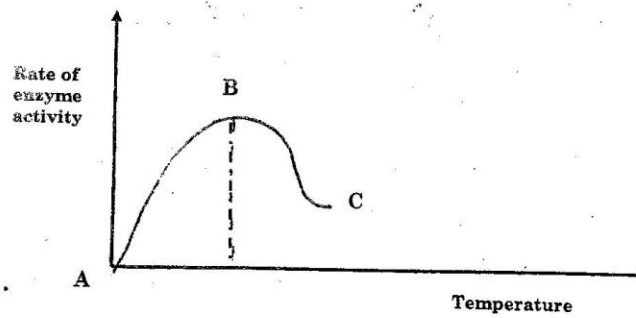
(1 mark)

(b) Name the parts of the organelle where:

(i) Light stage occurs:

(ii) dark stage occurs

11. The graph below shows action of heat on enzymes reaction



(a) What is the effect of temperature on the rate of enzymes reaction.

(2 marks)

(b) State the relationship between temperature and enzymes activity

(6 marks)

12. State the function of each of the following organelles

(a) Centrioles

(1 mark)

(b) Golgi body

(1 mark)

13. Explain the role of antidiuretic hormone when there is less water in the human body (3marks)

(b)(i) Give a reason for your answer in (a) above (1 mark)

(ii) Show by use of an arrow the direction of flow of the nerve impulses

19. Name three distinguishing feature for members of phylum Chordata. (3 marks)

20. State the reasons for the following adaptation of the xylem vessels (2 marks)

(i) Narrow lumen

(ii) Lack of cross walls

(b) State two distinguishing features of the phloem sieve tubes (2 marks)

21. During germination and early growth, the dry weight of endosperm decreases while that of the embryo increases. Explain (2 marks)

22. The table shows the percentage composition of blood plasma and urine for four substances

Component structure	blood plasma%	Urine%
Urea	0.03	2.0
Water	90	90
Plasma proteins	8.0	0
Glucose	0.1	0

(a) Account for the absence of plasma proteins in urine (1 mark)

(b) Urine concentration being greater in the urine than in the blood plasma (1 mark)

23. State advantages of sexual reproduction in organisms (3 marks)